

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN N. MOE, BRUCE J. CARLSON, SCOTT M. ADAMS
and RONALD VACCARO

Appeal No. 2004-0031
Application 09/485,656

HEARD: APRIL 14, 2004

Before JERRY SMITH, FLEMING and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 2-8, 10, 19-22, 24 and 26-28. Claims 9 and 23 have been indicated to contain allowable subject matter by the examiner. Claims 1, 11-18, 25 and 29-34 have been cancelled. An amendment after final rejection was filed on December 5, 2002 and was entered by the examiner.

The disclosed invention pertains to a coaxial cable.

Representative claim 4 is reproduced as follows:

4. A coaxial cable comprising:

a cylindrical plastic rod;

an electrically conductive tubular inner conductor surrounding said plastic rod, provided by forming a metal strip into a tubular configuration with the longitudinal side edges of the strip butted together and joined by a continuous longitudinal weld, and adhesively bonded to the plastic rod;

a continuous foam polymer dielectric layer closely surrounding the inner conductor; and

a tubular metallic outer sheath closely surrounding the foam polymer dielectric layer.

The examiner relies on the following references:

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| Mildner | 3,309,455 | Mar. 14, 1967 |
| Gerland et al. (Gerland) | 3,516,859 | June 23, 1970 |
| Hafner, Jr. (Hafner) | 4,399,322 | Aug. 16, 1983 |
| Hollander | 5,111,002 | May 05, 1992 |
| Barrett et al. (Barrett) | 5,371,823 | Dec. 06, 1994 |
| Buckel | 5,500,488 | Mar. 19, 1996 |
| Shotey et al. (Shotey) | 5,527,993 | June 18, 1996 |

The following rejections are on appeal before us:

1. Claims 2-5, 10, 19-22, 24 and 26-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Hafner in view of Hollander and Mildner.

2. Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Hafner in view of Hollander and Mildner and further in view of Barrett.

3. Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Hafner in view of Hollander and Mildner and further in view of Buckel and Shotey.

4. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Hafner in view of Hollander and Mildner and further in view of Gerland.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill

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in the art the obviousness of the invention as set forth in the claims on appeal. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness.

Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 1.192(a)].

We consider first the rejection of claims 2-5, 10, 19-22, 24 and 26-28 based on the teachings of Hafner in view of Hollander and Mildner. These claims stand or fall together as a single group [brief, page 2]. We will consider independent claim 4 as the representative claim for this group of claims. The examiner finds that Hafner teaches the coaxial cable of claim 4 except that Hafner does not teach the inner conductor being provided by forming a metal strip into a tubular configuration with longitudinal side edges of the strip abutted together and

joined by a continuous longitudinal weld, or being adhesively bonded to the plastic rod. The examiner cites Hollander as teaching a tubular conductor which is formed in the manner recited in claim 4. The examiner finds that it would have been obvious to the artisan to form the inner conductor of Hafner in the manner disclosed by Hollander. The examiner cites Mildner as teaching adhesive bonding in a coaxial cable. The examiner finds that it would have been obvious to the artisan to use adhesive bonding in Hafner as taught by Mildner [answer, pages 4-6].

Appellants argue that one of ordinary skill in the art would not be motivated to make the inner conductor of Hafner using the Hollander method because Hollander relates to thermocouples and not to the transmission of radio signals. Appellants assert that the artisan would not have expected the welding technique taught by Hollander to produce a conductor in Hafner that would successfully transmit radio signals [brief, pages 3-5].

The examiner responds that although the cable of Hollander is a thermocouple cable, Hollander's teaching to construct a conductor using an abutting seam with a longitudinal weld in order to obtain a smooth and continuous conductor is applicable to other types of cables [answer, pages 8-9].

Appellants respond that based on the teachings of the three applied references, the artisan would have been motivated to make the inner conductor of Hafner in the manner taught by Mildner rather than in the manner taught by Hollander because Mildner relates to signal transmission and Hollander relates to thermocouples [reply brief].

We will not sustain the examiner's rejection of independent claim 4 and of the other claims within this group. Although the examiner has pointed to Hollander as teaching the formation of a metal sheath by forming a metal strip into a tubular configuration with the longitudinal side edges of the strip butted together and joined by a weld, we agree with appellants that the applied prior art does not support the combination proposed by the examiner. First, we agree with appellants that the artisan in the field of coaxial cables for transmitting RF signals would not have looked to the thermocouple art for pertinent teachings. There is no suggestion in Hollander that the metal strip disclosed therein has any use in a coaxial cable for transmitting RF signals or that the signals conducted in Hollander have any relationship to RF signals. Second, Hollander discloses that welded metal strips suffer from diffusion problems into the surrounding environment [column 1,

lines 25-28]. Coaxial cables are required to transmit RF signals over long distances. The artisan would have been concerned about potential loss of the signals by way of diffusion. Therefore, we find that the artisan would not have been motivated to use the technique disclosed by Hollander in making the inner conductor of claim 4. The examiner's conclusion of obviousness is simply not supported by the specific prior art relied on.

We now consider the examiner's rejection of dependent claims 6-8 based on the teachings of Hafner in view of Hollander and Mildner and further in view of one or more of Barrett, Buckel, Shotey and Gerland. Even though these claims were rejected using a different combination of references than was used for claim 4, appellants have not separately argued these claims, and instead, have indicated that these claims should stand or fall with claim 4 [brief, page 2]. We have considered the additional teachings of Barrett, Buckel, Shotey and Gerland, and we find that none of these references overcome the deficiencies of the basic combination discussed above. Therefore, we also do not sustain the examiner's rejection of claims 6-8.

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In summary, we have not sustained any of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 2-8, 10, 19-22, 24 and 26-28 is reversed.

REVERSED

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| JERRY SMITH |) | |
| Administrative Patent Judge |) | |
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| MICHAEL R. FLEMING |) | BOARD OF PATENT |
| Administrative Patent Judge |) | APPEALS AND |
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| JOSEPH L. DIXON |) | |
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